1. A reflective liquid crystal display devicem comprising:

a liquid crystal layer sandwiched between a first substrate having a light reflectibility and a second substrate having a light transmissibility, the liquid crystal layer including twist-aligned nematic liquid crystal having a positive dielectric anisotropy; and

a circularly polarizing unit, including a single linear polarizer plate that selectively passes either right handed or left handed circularly polarized light out of natural light,

wherein, the first substrate, the liquid crystal layer, and the circularly polarizing means are stacked in this order to form at least a part of the reflective liquid crystal display device,

the circularly polarizing unit is disposed such that a major surface of the circularly polarizing unit is on a liquid crystal layer side, the circularly polarized light exiting the circularly polarizing unit through the major surface when natural light enters the circularly polarizing unit,

a liquid crystal in the liquid crystal layer has a birefringence difference, which, if multiplied by a thickness of the liquid crystal layer, produces a product of not less than 85nm and not more than 315nm, and

the liquid crystal layer has a twist angle in a range of 0° to 100°.

2. The reflective liquid crystal display device as set forth in claim 1, wherein

the circularly polarizing unit includes,

a first optical retardation compensator plate having a retardation in a substrate normal direction set to not less than 100nm and not more than 180nm, and

a second optical retardation compensator plate having a retardation in a substrate normal direction set to not less than 200nm and not more than 360nm,

the linear polarizer plate, the first optical retardation compensator plate, the second optical retardation compensator plate, and the linear polarizer plate being stacked in this order when viewed from the liquid crystal layer, and

$|2\times\theta 2 - \theta 1|$ has a value not less than 35° and not more than 55° where $\theta 1$ represents an angle formed by a slow axis of the first optical retardation compensator plate and either a transmission axis or an absorption axis of the linear polarizer plate, and $\theta 2$ represents an angle formed by a slow axis of the second optical retardation compensator plate and either the transmission axis or the absorption axis of the linear polarizer plate.

3. The reflective liquid crystal display device as set forth in claim 2, wherein

the twist angle of the liquid crystal layer is in a range of 60° to 100°,

the product of the birefringence difference of the liquid crystal in the liquid crystal layer and the thickness of the liquid crystal layer is not less than 250nm and not more than 330nm, and

either the transmission axis or the absorption axis of the linear polarizer plate forms an angle, θ3, of not less than 20° and not more than 70°, or not less than 110° and not more than 150° with an alignment direction of the liquid crystal molecules in a close proximity of the second substrate.

4. A reflective liquid crystal display device, comprising:

a liquid crystal layer sandwiched between a first substrate having a light reflexibility and a second substrate having a light transmissibility, the liquid crystal layer being composed of twist-aligned nematic liquid crystal having a positive dielectric anisotropy; and

a circularly polarizing unit, including a single linear polarizer plate, that selectively passes either

right handed or left handed circularly polarized light out of natural light,

wherein, the first substrate, the liquid crystal layer, and the circularly polarizing unit are stacked in this order to form at least a part of the reflective liquid crystal display device,

the circularly polarizing unit is disposed such that a major surface of the circularly polarizing unit is on a liquid crystal layer side, the circularly polarized light exiting the circularly polarizing unit through the major surface when natural light enters the circularly polarizing unit,

a liquid crystal in the liquid crystal layer has a birefringence difference, which, if multiplied by a thickness of the liquid crystal layer, produces a product of not less than 90nm and not more than 350nm, and

the liquid crystal layer has a twist angle in a range of 0° to 100°.

5. The reflective liquid crystal display device as set forth in claim 4, wherein

the circularly polarizing unit includes,

a first optical retardation compensator plate having a retardation in a substrate normal direction set to not less than 100nm and not more than 180nm, and

a second optical retardation compensator plate having a retardation in a substrate normal direction set to not less than 200nm and not more than 360nm, and

a linear polarizer plate, the first optical retardation compensator plate, the second optical retardation compensator plate, and the linear polarizer plate being stacked in this order when viewed from the liquid crystal layer, and

$|2\times\theta 2 - \theta 1|$ has a value not less than 35° and not more than 55°, where $\theta 1$ represents an angle formed by a slow axis of the first optical retardation compensator plate and either a transmission axis or an absorption axis of the linear polarizer plate, and $\theta 2$ represents an angle formed by a slow axis of the second optical retardation compensator plate and either the transmission axis or the absorption axis of the linear polarizer plate.

6. The reflective liquid crystal display device as set forth in claim 5, wherein

the twist angle of the liquid crystal layer is in a range of 60° to 100°,

the product of the birefringence difference of the liquid crystal in the liquid crystal layer and the thickness of the liquid crystal layer is not less than 250nm and not more than 330nm, and

either the transmission axis or the absorption axis of the linear polarizer plate forms an angle, θ3, of not less than 20° and not more than 70°, or not less than 110° and not more than 150° with an alignment direction of the liquid crystal molecules in a close proximity of the second substrate.

7. A reflective liquid crystal display device, comprising:

a first substrate having a light reflectibility;

a second substrate having a light transmissibility;

a liquid crystal layer sandwiched between the first substrate and the second substrate, the liquid crystal layer being composed of twist-aligned nematic liquid crystal having,

a positive dielectric anisotropy,

a birefringence difference, which if multiplied by a thickness of the liquid crystal layer produces a product in the range of not less than 90 nm and not more than 185 nm, or not less than 385 nm and not more than 450 nm, and

a twist angle in a range of 0° to 10°; and

a circular polarizing unit that selectively passes either right handed or left handed substantially circularly

polarized light out of a plurality of wavelengths of natural light in the visible spectrum,

wherein, the circular polarizing unit is disposed such that a major surface of the circular polarizing unit is on a liquid crystal layer side, the substantially circularly polarized light exiting the circular polarizing unit through the major surface when natural light enters the circular polarizing unit, and

wherein, said incoming substantially circularly polarized light being linearly polarized at a surface of said first substrate in a plurality of directions respectively representative of said plurality of wave lengths of said natural light to thereby create a display.

8. A reflective liquid crystal display device, comprising:

a first substrate having a light reflectibility;

a second substrate having a light transmissibility;

a liquid crystal layer sandwiched between the first substrate and the second substrate, the liquid crystal layer being composed of twist-aligned nematic liquid crystal having,

a positive dielectric anisotropy,

a birefringence difference, which if multiplied by a thickness of the liquid crystal layer produces a product in the range of not less than 95 nm and not more

than 190 nm, or not less than 380 nm and not more than 445 nm, and

a twist angle in a range of 10° to 20°; and

a circular polarizing unit that selectively passes either right handed or left handed substantially circularly polarized light out of a plurality of wavelengths of natural light in the visible spectrum,

wherein, the circular polarizing unit is disposed such that a major surface of the circular polarizing unit is on a liquid crystal layer side, the substantially circularly polarized light exiting the circular polarizing unit through the major surface when natural light enters the circular polarizing unit, and

wherein, said incoming substantially circularly polarized light being linearly polarized at a surface of said first substrate in a plurality of directions respectively representative of said plurality of wave lengths of said natural light to thereby create a display.

9. A reflective liquid crystal display device, comprising:

a first substrate having a light reflectibility;

a second substrate having a light transmissibility;

a liquid crystal layer sandwiched between the first substrate and the second substrate, the liquid crystal

layer being composed of twist-aligned nematic liquid crystal having,

a positive dielectric anisotropy,

a birefringence difference, which if multiplied by a thickness of the liquid crystal layer produces a product in the range of not less than 100 nm and not more than 190 nm, or not less than 370 nm and not more than 440 nm, and

a twist angle in a range of 20° to 30°; and

a circular polarizing unit that selectively passes either right handed or left handed substantially circularly polarized light out of a plurality of wavelengths of natural light in the visible spectrum,

wherein, the circular polarizing unit is disposed such that a major surface of the circular polarizing unit is on a liquid crystal layer side, the substantially circularly polarized light exiting the circular polarizing unit through the major surface when natural light enters the circular polarizing unit, and

wherein, said incoming substantially circularly polarized light being linearly polarized at a surface of said first substrate in a plurality of directions respectively representative of said plurality of wave lengths of said natural light to thereby create a display.

10. A reflective liquid crystal display device, comprising:

a first substrate having a light reflectibility;

a second substrate having a light transmissibility;

a liquid crystal layer sandwiched between the first substrate and the second substrate, the liquid crystal layer being composed of twist-aligned nematic liquid crystal having,

a positive dielectric anisotropy,

a birefringence difference, which if multiplied by a thickness of the liquid crystal layer produces a product in the range of not less than 100 nm and not more than 205 nm, or not less than 345 nm and not more than 430 nm, and

a twist angle in a range of 30° to 45°; and

a circular polarizing unit that selectively passes either right handed or left handed substantially circularly polarized light out of a plurality of wavelengths of natural light in the visible spectrum,

wherein, the circular polarizing unit is disposed such that a major surface of the circular polarizing unit is on a liquid crystal layer side, the substantially circularly polarized light exiting the circular polarizing unit through the major surface when natural light enters the circular polarizing unit, and

wherein, said incoming substantially circularly polarized light being linearly polarized at a surface of said first substrate in a plurality of directions respectively representative of said plurality of wave lengths of said natural light to thereby create a display.

11. The reflective liquid crystal display device as set forth in any one of claims 7, 8, 9 and 10, wherein

the first substrate having a light reflectibility includes a light reflective film, and

the light reflective film has smooth and continuously changing concavities and convexities, and is made of a conductive material.

12. The reflective liquid crystal display device as set forth in any one of claims 7, 8, 9 and 10, further comprising:

one of an optical retardation compensator unit and a plurality of optical retardation compensator units provided between the circular polarizing unit and the liquid crystal layer to minimize influence from a residual phase difference of the liquid crystal layer.

13. The reflective liquid crystal display device as set forth in any one of claims 7, 8, 9 and 10, wherein

the circular polarizing unit performs as an optical retardation compensator that minimizes influence from a residual phase difference of the liquid crystal layer during application of a voltage to the liquid crystal layer.

14. The reflective liquid crystal display device as set forth in any one of claims 7, 8, 9 and 10, wherein the circular polarizing unit includes,

a first optical retardation compensator plate,

a second optical retardation compensator plate having a retardation in a substrate normal direction set to not less than 200 nm and not more than 360 nm, and

a linear polarizer plate, and

wherein, $|2\times\theta 2 - \theta 1|$ has a value not less than 35° and not more than 55°, where θ1 represents an angle formed by a slow axis of the first optical retardation compensator plate and either a transmission axis or an absorption axis of the linear polarizer plate, and θ2 represents an angle formed by a slow axis of the second optical retardation compensator plate and either the transmission axis or the absorption axis of the linear polarizer plate,

a direction of the slow axis of the first optical retardation compensator plate is parallel to an alignment

direction of a liquid crystal in a middle of the liquid crystal later in a thickness direction, and

a retardation in the substrate normal direction of the first optical retardation compensator plate is set to a retardation that is smaller, by 10 nm to 50 nm, than a retardation for not less than 100 nm and not more than 180 nm that provides, across an entire visible range, a phase difference equivalent to a quarter wavelength.

15. The reflective liquid crystal display device as set forth in any one of claims 7, 8, 9 and 10, wherein the circular polarizing unit includes,

a first optical retardation compensator plate,

a second optical retardation compensator plate having a retardation in a substrate normal direction set to not less than 200 nm and not more than 360 nm, and

a linear polarizer plate, and

wherein, $|2\times\theta 2 - \theta 1|$ has a value not less than 35° and not more than 55°, where $\theta 1$ represents an angle formed by a slow axis of the first optical retardation compensator plate and either a transmission axis or an absorption axis of the linear polarizer plate, and $\theta 2$ represents an angle formed by a slow axis of the second optical retardation compensator plate and either the transmission axis or the absorption axis of the linear polarizer plate,

the slow axis of the first optical retardation compensator plate is orthogonal to an alignment direction of a liquid crystal in a middle of the liquid crystal later in a thickness direction, and

a retardation in the substrate normal direction of the first optical retardation compensator plate is set to a retardation that is greater, by 10 nm to 50 nm, than a retardation for not less than 100 nm and not more than 180 nm that provides, across an entire visible range, a phase difference equivalent to a quarter wavelength.

16. A reflective liquid crystal display device, comprising:

a first substrate having a light reflectibility;

a second substrate having a light transmissibility;

a liquid crystal layer sandwiched between the first substrate and the second substrate, the liquid crystal layer being composed of twist-aligned nematic liquid crystal having,

a positive dielectric anisotropy,

a birefringence difference, which if multiplied by a thickness of the liquid crystal layer produces a product in the range of not less than 100 nm and not more than 185 nm, or not less than 385 nm and not more than 430 nm, and

a twist angle in a range of 0° to 45°; and

a circular polarizing unit, including a single linear polarizer plate, that selectively passes either right handed or left handed substantially circularly polarized light out of a plurality of wavelengths of natural light in the visible spectrum,

wherein, the circular polarizing unit is disposed such that a major surface of the circular polarizing unit is on a liquid crystal layer side, the substantially circularly polarized light exiting the circular polarizing unit through the major surface when natural light enters the circular polarizing unit, and

wherein, said incoming substantially circularly polarized light being linearly polarized at a surface of said first substrate in a plurality of directions respectively representative of said plurality of wave lengths of said natural light to thereby create a display.

17. A reflective liquid crystal display device, comprising:

a first substrate having a light reflectibility;

a second substrate having a light transmissibility;

a liquid crystal layer sandwiched between the first substrate and the second substrate, the liquid crystal layer being composed of twist-aligned nematic liquid crystal having,

a positive dielectric anisotropy,

a birefringence difference, which if multiplied by a thickness of the liquid crystal layer produces a product in the range of not less than 95 nm and not more than 125 nm, and

a twist angle in a range of 0° to 45°; and

a circular polarizing unit, including a single linear polarizer plate, that selectively passes either right handed or left handed substantially circularly polarized light out of a plurality of wavelengths of natural light in the visible spectrum,

wherein, the circular polarizing unit is disposed such that a major surface of the circular polarizing unit is on a liquid crystal layer side, the substantially circularly polarized light exiting the circular polarizing unit through the major surface when natural light enters the circular polarizing unit, and

wherein, said incoming substantially circularly polarized light being linearly polarized at a surface of said first substrate in a plurality of directions respectively representative of said plurality of wave lengths of said natural light to thereby create a display.

18. A reflective liquid crystal display device, comprising:

a first substrate having a light reflectibility;

a second substrate having a light transmissibility;

a liquid crystal layer sandwiched between the first substrate and the second substrate, the liquid crystal layer being composed of twist-aligned nematic liquid crystal having,

a positive dielectric anisotropy, and

a birefringence difference Δn, a thickness of the liquid crystal layer d, and a twist angle ϕ_{tw} in the range of 0° to 45°, such that the value of the function

$$f_{vis} = k\int_{380}^{780}\bar{y}(\lambda)S_{D65}(\lambda)f(\lambda)d\lambda$$

is 0.7 or higher, where

$$k = 1/\int_{380}^{780}\bar{y}(\lambda)S_{D65}(\lambda)d\lambda$$

$\bar{y}(\lambda)$ is the visual sensitivity curve of the color matching function of CIE1931,

$S_{D65}(\lambda)$ is the spectrum density of a D_{65} standard light source,

$$f(\lambda) = 1 - \left\{1 - 2\phi_{ret}^2(\sin c\sqrt{\phi_{ret}^2 + \phi_{tw}^2})^2\right\}^2$$

$$\phi_{ret} = \pi\frac{\Delta nd}{\lambda} \qquad and$$

$$\sin cX = \frac{\sin X}{X} \quad ; \text{ and}$$

a circular polarizing unit, including a single linear polarizer plate, that selectively passes either right

handed or left handed substantially circularly polarized light out of a plurality of wavelengths of natural light in the visible spectrum,

wherein, the circular polarizing unit is disposed such that a major surface of the circular polarizing unit is on a liquid crystal layer side, the substantially circularly polarized light exiting the circular polarizing unit through the major surface when natural light enters the circular polarizing unit, and

wherein, said incoming substantially circularly polarized light being linearly polarized at a surface of said first substrate in a plurality of directions respectively representative of said plurality of wave lengths of said natural light to thereby create a display.

19. A reflective liquid crystal display device, comprising:

a first substrate having a light reflectibility;

a second substrate having a light transmissibility;

a liquid crystal layer sandwiched between the first substrate and the second substrate, the liquid crystal layer being composed of twist-aligned nematic liquid crystal having a positive dielectric anisotropy and a twist angle in a range of 0° to 45°; and

a circular polarizing unit that selectively passes either right handed or left handed substantially circularly polarized light out of a plurality of wavelengths of natural light in the visible spectrum,

wherein, the circular polarizing unit is disposed such that a major surface of the circular polarizing unit is on a liquid crystal layer side, the substantially circularly polarized light exiting the circular polarizing unit through the major surface when natural light enters the circular polarizing unit, and

wherein, said incoming substantially circularly polarized light being linearly polarized at a surface of said first substrate in a plurality of directions respectively representative of said plurality of wave lengths of said natural light to thereby create a display.